

ABSTRACT OF THE DISCLOSURE

An architecture for efficiently identifying the scope and timeframe of database errors, providing online history images, creating online point-in-time views of application tables, reconstructing equivalent SQL statements of a committed transaction or of a user session, providing a selective audit trail report on demand, and permitting selective online rollbacks in an application database. The rollback can be done on a single row, a single transaction, a group transactions, a user session, or all user tables. The system includes after images tables and before images tables and tracks all before images of user application tables when a user performs an INSERT, UPDATE, or DELETE operation with respect to a row in a table. Also, the system is provided to generate history images of application tables at a point-in-time, and to selectively rollback, or undo whole or a portion of application tables, to generate a selective audit trail report on demand, and to manage the before images.